Packing all the free coil parameters into a one rank vector.

0.1 Overview

- The `case_coils` determines the packing and unpacking patern.
- `case_coils` = 1: Coils are represented with Fourier series.
- For each coil, the number of DOF is $6N_F + 4$ ($\sin 0$ terms are omitted.)

$$\mathbf{X_i} = \left[\overbrace{I, \underbrace{X_{c,0}, \cdots, X_{c,N}}_{\text{N+1}}, \underbrace{X_{s,1}, \cdots, X_{s,N}}_{\text{N}}, Y_{c,0}, \cdots, Z_{s,N}}^{\text{6N+4}} \right] \tag{1}$$

- Coil currents/geometry can also be fixed, and they are determined by coil%Ic and coil%Lc.
- The total number of DOF $Ndof$ should be

$$Ndof = Ncoils * (6 * NFcoil + 4) - Nfixcur - Nfixgeo * (6 * NFcoil + 3) \tag{2}$$

packdof.f90 last modified on 020-01-16 23:01:42.; Focus subroutines;